Remarks and Arguments

Claims 1-6 are pending in this application. Claim 6 has been withdrawn from consideration as a result of a restriction requirement. Claims 1-5 are rejected.

With this amendment claims 1 and 3 are amended and claim 2 is cancelled.

As a result of this Amendment and the following discussion, the applicants believe that all of the claims now remaining in the application – in their present form – are allowable.

If however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone Jeffery J. Brosmer, Ph.D., ESQ. At 732-335-5773, so that arrangements may be made for resolving such issues as expeditiously as possible.

Claim Rejections 35 U.S.C. § 102(b)

Claims 1 - 5 are rejected under the provisions of 35 U.S.C. § 102(b) as being anticipated by Li et al., in an article entitled "Support Vector Regression and Classification Based On Multi-View Face Detection and Recognition", which was presented at FG2000.

In response, the applicants have amended claims 1 and 3, and cancelled claim 2. In view of these amendments and the following discussions, the applicants submit that all of the claims now present in the application are not anticipated by the Li et al reference.

Before discussing this reference in detail however, it is worthwhile to first review the claimed invention of the instant application. In particular, and as can be readily appreciated, one of the main hurdles in human face recognition results from variations of facial images due to pose changes. To determine facial pose, the present applicants have developed a sparse representation of a human face, which advantageously captures unique features of the human face effectively, while facilitating the estimation of head position and pose. More particularly, the sparse representation is collection of projections to a number of randomly generated possible configurations of the human face. Each projection corresponds to a pose of the head

along with facial features' configuration, and advantageously responds to changes in pose and feature configuration while ignoring other image variations such as lighting, hair and background.

Turning now to the Li et al reference, there it is disclosed a face detection and recognition framework employing the use of a generic pre-processing (Sobel filter & PCA) for gradient features to estimate facial pose. Despite the Examiner's suggestion that Li et al employs the use of a "sparse representation", there is nothing "sparse" at all about using Sobel filters and PCA. Sobel operators merely ENHANCE the gradient features while PCA reduces redundancy (dimensionality).

As the examiner can surely appreciate, there is simply no teaching or suggestion of the use of sparse representations in the Li et al publication, and certainly no sparse representation generated by transforming a raw facial image into sets of vectors representing fits of the face to a random, sparse set of model configurations as only now taught and claimed by the instant applicants.

Given this, the applicants submit that independent claim 1 – as amended – is not anticipated by the Li et al reference. Since the remaining dependent claims 3 – 5 each depends therefrom and recites further distinguishing aspects of the invention – the applicants submit that they too are not anticipated by the Li et al reference. Accordingly, the applicants respectfully request the Examiner to withdraw the rejections based upon 35 USC 102.

Conclusion

The applicants submit that all of the claims now present in the application fully comply with the provisions of 35 U.S.C. § 102 and therefore are allowable. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,
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CERTIFICATE OF TRANSMISSION UNDER 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being transmitted to the United States Patent and Trademark Office on 16-AUG-2007.

s/Jeffery J. Brosemer/
Signature

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